

Please amend the application as follows.

IN THE CLAIMS:

Please replace claims 2, 10, 12, 69-71, 77-82 and 90-91 with the following amended claims:

A1 **B1**
2. (Amended) The system of claim 1, wherein the software development tools are for generating software development tools to generate code to run on the processor.

A2
10. (Amended) The system of claim 9, wherein the instruction set simulator is to model execution of code being simulated to measure key performance criteria including cycles of execution.

A3
12. (Amended) The system of claim 10, wherein the instruction set simulator is to profile execution of the program being simulated to record standard profiling statistics, including a number of cycles executed in each simulated function.

A4
69. (Amended) The system of claim 1 wherein the means for generating a description of a hardware implementation of the processor is further for providing a characterization of hardware performance and cost, and the means for generating the software development tools are for generating software application performance information together with the means for generating a description of a hardware implementation of the processor, to facilitate modification of the configuration specification.

70. (Amended) The system of claim 1 wherein the means for generating a description of a hardware implementation of the processor is further for providing a characterization of hardware performance and cost, and the means for generating the software development tools are for generating software application performance information together with the means for generating a description of a hardware implementation of the processor, to facilitate an extension of the configuration specification.

71. (Amended) The system of claim 1 wherein:

the means for generating a hardware description of the processor is further for providing a characterization of hardware performance and cost, and the means for generating the software development tools are for generating software application performance information together with the means for generating a description of a hardware implementation of the processor, to facilitate modification of the configuration specification; and

the means for generating a hardware description of the processor is for providing a characterization of hardware performance and cost, and the means for generating the software development tools are for generating software application performance information together with the means for generating a description of a hardware implementation of the processor, to facilitate the description of an extension of the configuration specification.

77. (Amended) The system of claim 75, wherein the software development tools include a compiler to generate the user-defined instruction.

78. (Amended) The system of claim 77, wherein the compiler is to optimize code containing user-defined instructions.

79. (Amended) The system of claim 75, wherein the software development tools include an assembler to generate the user-defined instruction.

AS
comp
80. (Amended) The system of claim 75, wherein the software development tools include a simulator to simulate execution of user code using the user-defined instruction.

81. (Amended) The system of claim 75, wherein the software development tools include tools to verify the user implementation of the user-defined instruction.

82. (Amended) The system of claim 74, wherein the compiler is to automatically generate additional instructions.

AC
90. (Amended) The system of claim 74, wherein the additional structure adds no new state to the processor.

91. (Amended) The system of claim 74, wherein the additional instruction adds state to the processor.